OFFICE OF THE
PARLIAMENTARY
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BUREAU DU DIRECTEUR
PARLEMENTAIRE DU
BUDGET

CANADA

Taxation of employer-provided health benefits

Ottawa, Canada
24 May 2018
www.pbo-dpb.gc.ca

The Parliamentary Budget Officer (PBO) supports Parliament by providing analysis, including analysis of macro-economic and fiscal policy, for the purposes of raising the quality of parliamentary debate and promoting greater budget transparency and accountability.

In response to a request from two members of parliament, the PBO has prepared an estimate of the impacts of including employer-paid health benefits in an individual's taxable income.

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This analysis is based on Statistics Canada's Social Policy Simulation Database and Model. The assumptions and calculations underlying the simulation results were prepared by the author and the responsibility for the use and interpretation of these data is entirely that of the author.

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Executive Summary

Two parliamentarians requested the Parliamentary Budget Officer (PBO) to measure the federal fiscal impact of including employer-paid health benefits (that is, employer contributions to a private health services plan and/or employee benefits) in the taxable income of employees.

PBO determined that this measure would increase federal personal income tax receipts by $2.8 billion.

For the analysis, PBO used data from Statistics Canada's Social Policy Simulation Database and Model (SPSD/M). We also used data provided by the Canadian Life and Health Insurance Association (CLHIA), benefits benchmarks from the Conference Board of Canada, and coverage ratios presented in a Wellesley Institute policy paper.

The majority of the new tax burden would be borne by high-income individuals, since they are the people most likely to work in jobs that provide such benefits. They are also the taxpayers facing the highest marginal tax rate.

However, when lower income workers or retirees[1] receive such employer-provided benefits, they would face a higher tax burden, although it would be mitigated to some extent by the medical expense tax credit.

Taxable benefits (whether in cash or non-cash benefits) are generally pensionable, and thus subject to Canada Pension Plan (CPP) contributions. Therefore, CPP contributions would also increase by $532 million.

CPP contributions are capped at maximum annual pensionable earnings of $55,900. Consequently, it is only employees earning less than this amount who would be affected by including health benefits in their taxable income.

For example, an employee that benefits from an extended health care plan paid at 100 per cent by the employer (representing an average annual premium of $1,400), and who pays the current CPP contribution rate of 4.95 per cent, would incur an annual increase of $70 in his or her CPP contributions.

In the case of Employment Insurance (EI), non-cash benefits are not insurable. Therefore, the inclusion of employer-provided health benefits would not increase EI contributions or benefits for employees.

Finally, including these benefits in an individual's taxable income would also increase his or her net income (line 236 of the T1 return). This figure is used to determine the amount of Canada Child Benefit (CCB) that will be paid in

the following year. Thus, the federal government would also incur a $317-million decline in CCB payments the following year.

Similarly, benefits for the elderly would decrease. These include the Old Age Security, Guaranteed Income Supplement and the Allowance for a spouse/common-law partner.

Summary Table 1 presents the breakdown of the fiscal impact for the federal government of including such employer-paid benefits in the taxable income of the recipient.

Summary Table 1

Change in federal tax revenues and transfer payments (2018)

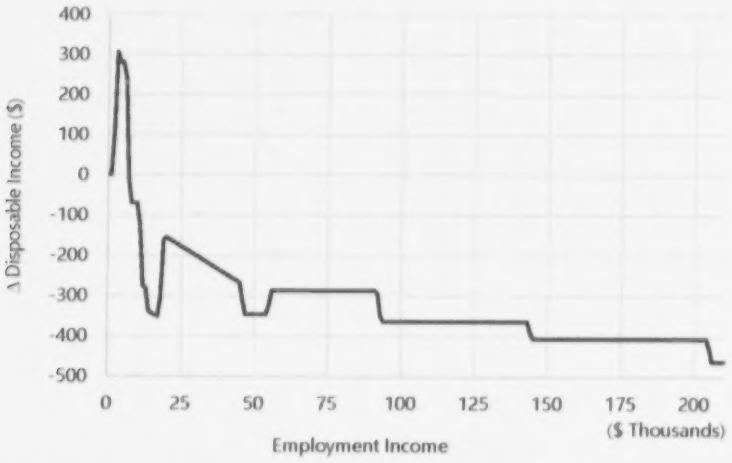
Tax or transfer item	$ millions
Federal Personal Income Tax	2,838
CPP Contributions	532
Working Income Tax Benefit	-35
Canada Child Benefit	-317
Old Age Security	-47
Guaranteed Income Supplement	-27
Allowance for Spouse/Common-law Partner	-5
Refundable Medical Expense Supplement	-10
Federal Net Balance	**3,810**

Sources: Statistics Canada SPSD/M 26.0 and Parliamentary Budget Officer.

Note: The changes in transfer payments are all negative since they represent decreases in these payments. However, they are positively contributing to the federal net balance. The change in Federal Personal Income Tax is net of all non-refundable tax credits.

Summary Figure 1 shows the change in disposable income with respect to the employment income (excluding the value of health benefits) of a single, 30-year-old taxpayer living in Ontario with no children, having employer-paid health benefits valued at $1,400 and no other medical expenses (using 2018 tax parameters).[2]

Summary Figure 1 **Change in disposable income when including employer-paid health benefits in taxable income**



As can be seen, the decline in disposable income increases with income. On the first $2,000 of employment income, there is no impact on disposable income. This is because the individual does not pay taxes yet because of the basic personal amount non-refundable tax credit (which amounts to $11,809) and also because the first $3,500 of employment income are exempt from CPP contributions.

Over the next few thousand dollars of employment income, there is a spike and a dip in disposable income due to the working income tax benefit (WITB). WITB is applicable if the individual earns more than $3,000 of employment income. However, the amount of WITB begins to phase out with a net income above $12,016 for a single individual (line 236 of the T1).[3]

Therefore, including employer-paid benefits in net income makes very low earners eligible for payments, but phases out the WITB more quickly. The WITB is completely phased out with a net income above $19,076.

Finally, as the employment income increases from $20,000 to $47,000, the non-refundable medical expense tax credit is phased out.[4] There is also a slight increase in the change in disposable income around $56,000 as the individual reaches the maximum pensionable earnings of $55,900 under the CPP. The employee does not need to contribute to CPP on earnings above this amount.

Once the non-refundable medical expense tax credit is completely phased out and the maximum pensionable earnings under CPP is reached, the impact on disposable income is identical for all individuals in the same tax bracket; hence, the rest of the figure resembles a staircase.

1. Background

Two parliamentarians requested the Parliamentary Budget Officer (PBO) to estimate the federal income tax revenue that would be generated if the government were to treat employer-paid health plans as a taxable benefit. They also requested the impact of this measure on different Canadian households.

The federal government announced in Budget 2016 that it would undertake a comprehensive review of federal tax expenditures.[5] "The objective of the review is to ensure that federal tax expenditures are fair for Canadians, efficient and fiscally responsible."[6]

In January 2017, several news sources indicated the federal government was considering taxing employer contributions to private health services plans and/or employee benefits received from such plans. The measure did not appear in either Budget 2017 or Budget 2018, and the government has not indicated whether it is still considering this option.

Under the baseline tax system, most employer-paid benefits are taxed at the personal level. For example, the value related to the personal use of an employer-provided vehicle must be computed and added to an individual's taxable income when he or she files his or her tax return.

Employer contributions to extended health benefits or dental plans are excluded from that rule. Employees receiving benefits from such plans do not have to include them in their taxable income.[7]

However, the employer can still deduct the value of the premiums paid from its taxable income (as any other business expenditure).

2. Methodology

To measure the increase in federal tax receipts, we need to know:

- the number of workers and retirees benefiting from such plans;
- their level of income, tax payable and medical expenses prior to the inclusion of said benefits; and
- the value of the premiums paid by the employer.

The Canadian Life and Health Insurance Association (CLHIA) provided the number of certificate holders in group plans for each different type of benefit plan (extended health care, dental, supplementary hospital, etc.). The CLHIA also provided total premiums paid, with a breakdown by province.

PBO used data from Barnes and Anderson (2015)[8] to allocate benefits to individuals in different income brackets. As can be expected, individuals in higher paying jobs have a higher probability of having employer-paid health benefits.

We also used survey results presented in the Conference Board of Canada's *Benefits Benchmarking 2015*[9] to determine the proportion of cost-sharing between employers and employees (or retirees) on such benefits.

Finally, we allocated the different types of benefits (randomly within income brackets) to the individuals in Statistics Canada's Social Policy Simulation Database and Model (SPSD/M).

To measure the increase in government tax revenues, we ran a micro-simulation of the baseline tax system and the alternative tax system under which employer-paid benefits are taxable, but also included as eligible medical expenses for the non-refundable tax credit.

Consult Appendix A for a more detailed account of the methodology.

3. Results

Under our alternate tax simulation, in which employer-paid contributions are included in taxable income, PBO found that the federal government net balance would increase by $3.8 billion for the 2018 tax year.

This increase occurred through eight different channels as shown in Table 3-1 and explained below. As can be seen in Table 3-1, almost 75 per cent of that increase, or just over $2.8 billion, would come from an increase in federal personal income tax (PIT) payable.

Table 3-1 Change in federal tax revenues and transfer payments (2018)

Tax or transfer item	$ millions
Federal Personal Income Tax	2,838
CPP Contributions	532
Working Income Tax Benefit	-35
Canada Child Benefit	-317
Old Age Security	-47
Guaranteed Income Supplement	-27
Allowance for Spouse/Common-law Partner	-5
Refundable Medical Expense Supplement	-10
Federal Net Balance	**3,810**

Sources: Statistics Canada SPSD/M 26.0 and Parliamentary Budget Officer.

Note: The changes in transfer payments are all negative since they represent decreases in these payments. However, they are positively contributing to the federal net balance. The change in Federal Personal Income Tax is net of all non-refundable tax credits.

Personal income tax

This is the most obvious channel. Including benefits in an individual's taxable income will necessarily increase his or her tax payable, unless he or she is earning less than the basic personal amount of $11,809.

Because of the progressive structure of the PIT rates, individuals earning higher income face higher marginal tax rates. Thus, taxing the value of employer-paid benefits results in higher tax receipts from these individuals.

Table 3-2 provides a breakdown of the increase in PIT (before and after applying tax credits) by family income deciles.[10] As expected, families in the highest decile account for the largest share of the increase in PIT receipts (26.4 per cent).

Indeed, based on our assumptions for the allocation of benefits, high earners have a higher probability of being covered by such benefits. Since they face a higher marginal tax rate, they also pay more taxes on the value of those benefits.

Furthermore, the increase in PIT revenues is computed net of the increase in the non-refundable medical expenses tax credit. This credit is computed on the eligible medical expenses that are in excess of the lesser of 3 per cent of the individual's net income, or $2,302.

If the premiums paid by the employer become a taxable benefit included in the taxable income of an individual, then he can claim the value of these premiums as an eligible medical expense.

Thus, an employee with no other medical expenses and an employer-paid premium of $1,400 would be able to claim the medical expenses tax credit if he earns less than $46,667. Above that amount, the value of the premium is less than 3 per cent of his income.[11]

Table 3-2 Increase in federal PIT payable by family income deciles (2018)

Decile [Family Income Range ($)]	Federal PIT before credits ($M)	Share of total increase (%)	Net Federal PIT payable ($M)	Share of total increase (%)
D1 [Min - 1,211]	15	0.4	0	0.0
D2 [1,212 - 13,521]	136	3.3	12	0.4
D3 [13,522 - 26,184]	209	5.1	67	2.3
D4 [26,185 - 39,939]	287	7.0	145	5.1
D5 [39,940 - 53,639]	371	9.0	234	8.2
D6 [53,640 - 70,652]	402	9.8	285	10.0
D7 [70,653 - 90,102]	525	12.8	374	13.2
D8 [90,103 - 117,556]	578	14.1	440	15.5
D9 [117,557 - 164,057]	679	16.5	533	18.8
D10 [164,058 - Max]	910	22.1	748	26.4
TOTAL	**4,112**	**100.0**	**2,838**	**100.0**

Sources: Statistics Canada SPSD/M 26.0 and Parliamentary Budget Officer.

Canada Pension Plan contributions

Taxable benefits (whether in cash or non-cash benefits) are generally pensionable and thus subject to Canada Pension Plan (CPP) contributions. Therefore, if we include health benefits in taxable income, CPP contributions would also increase by $532 million.

Since CPP contributions are capped at maximum annual pensionable earnings of $55,900, it is only employees earning less than this amount who would be affected by including health benefits in their taxable income.

For example, an employee that benefits from an extended health care plan paid at 100 per cent by the employer (representing an average annual premium of $1,400), and who pays the current CPP contribution rate of 4.95 per cent, would incur an annual increase of $70 in his or her CPP contributions.

Since Quebec is already including employer-paid contributions to health benefits plans in taxable income when calculating the provincial PIT payable, there shouldn't be any impact on Quebec Pension Plan (QPP) contributions. Furthermore, Revenu Quebec indicates that a taxable benefit in kind is not subject to source deductions for QPP contributions.[12]

Non-cash benefits are not insurable for Employment Insurance (EI) purposes. Therefore, making employer-provided health benefits taxable would not increase EI contributions. Similarly, the benefits are not subject to Quebec parental insurance plan (QPIP) premiums.

Working Income Tax Benefit

The WITB is a refundable tax-credit designed to encourage participation in the labour market. It starts to be paid if the individual earns more than $3,000 of employment income[13], at a rate of 25 per cent on the excess of that amount (the payment is capped at $1,059).

The payment starts to be reduced when employment income is above $12,016; it is completely phased out at $19,076. A single individual without children will receive the maximum benefit of $1,059 with employment income between $7,236 and $12,016.

For our costing exercise, we assumed the value of employer-paid contributions would be included in the working income used to calculate the WITB payable. However, the government could decide not to include it, because doing so would increase the amount of WITB received by low-earning individuals who happen to have employer-provided benefits.

We also included the benefits value in the employee's net income used to reduce the WITB. Thus, some very low earners will realize an increase in WITB. However, for most, including employer-paid benefits results in phasing out the WITB more quickly.

Figure 3-1 Change in disposable income when including employer-paid contributions in working income vs net income

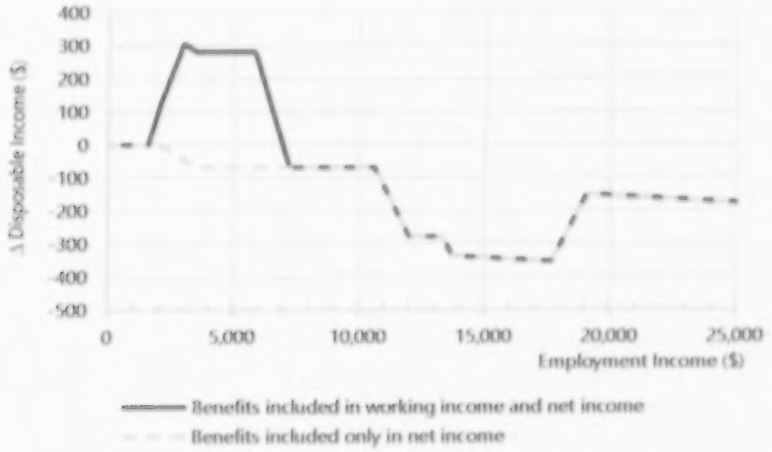


Figure 3-1 shows the change in disposable income when including employer-paid contributions in the working income and net income as opposed to only in the net income. This chart illustrates the case for a single 30-year-old taxpayer living in Ontario with no children, having employer-paid health benefits valued at $1,400, no other medical expenses and an employment income (excluding the value of health benefits) of between $0 and $25,000.

As can be seen, both scenarios display a dip in disposable income when the employment income is between $11,000 and $19,000, because of the reduction in WITB caused by the increase in net income.

When including the value of the contributions in the working income, the employee with an employment income of $2,000 or more sees an increase in his disposable income, since he becomes eligible for the WITB.[14]

In terms of government revenues, the additional WITB payments to very low earners would represent $11 million. This would be offset by a $46-million decrease in payments to other workers benefiting from WITB. The net effect on government revenues would be an increase of $35 million.

Canada Child Benefit

The Canada Child Benefit (CCB) is a non-taxable payment made to families with minor children to help them with the cost of raising children.

The benefits are paid from July to June of the following year and are based on the family net income from the previous calendar year. Thus, payments beginning in July 2018 are based on the net income of 2017. The benefits start to decline when family net income rises above $30,000.[15]

Since including employer-paid benefits would increase the net income of the employee (line 236), this would negatively affect CCB payments in a subsequent year. We estimated the reduction in CCB payments would amount to $317 million.[16]

Depending on the number of children and the family's income, including employer-paid benefits in net income could decrease the next year's CCB annual payment by as much as $100 per child.

As CCB payments are completely clawed-back at a much higher income than most income-tested benefits, the only families not affected by the inclusion of employer-paid benefits would be those in the top income percentiles that are already ineligible for CCB.

Old Age Security, Guaranteed Income Supplement and the Allowance for Spouse/Common-law Partner

Old Age Security (OAS) is a universal benefit available to seniors aged 65 and over. The amount received is determined by the number of years lived in Canada after the age of 18.

Therefore, it is available whether or not the person has worked in his or her life; it is paid even if the individual is still working. However, there is an OAS repayment if the individual has a net income (excluding the OAS amount) of more than $74,788 up to $121,314. After this level, the individual is no longer eligible for OAS payments.

Including employer-paid contributions in net income will impact only seniors earning income (either salary, private pension or a combination of both) in the repayment range. This increase in OAS repayment is relatively small, amounting to $47 million.

The Guaranteed Income Supplement (GIS) is a benefit to OAS recipients with low income who usually have little or no retirement income other than the OAS. The amount of GIS received depends on the previous year's income. Individuals above a certain income threshold ($17,880 for a single, widowed or divorced pensioner) are not eligible to receive GIS payments.

In the case of GIS, including the value of employer-paid contributions in an individual's income will decrease his or her benefits in the subsequent years. The impact on GIS would affect only low-income seniors. Note, however, that they are less likely to receive employer-paid benefits, since these benefits are usually allocated to retirees alongside pension payments from the employer.[17]

Furthermore, if the government was to include employer-paid health benefits in taxable income, it could exclude them to calculate GIS benefits. The decline in GIS payments amounts to an estimated $27 million.

Finally, people aged 60 to 64 who are the spouse or common-law partner of an individual receiving an OAS pension as well as GIS are eligible for the allowance. However, if the combined income of the couple is above $33,072, the spouse does not receive any allowance.

Therefore, including employer-paid contributions in the income of either spouse could reduce the amount of allowance. Just like the GIS, this would affect low-income individuals. Again, however, they are less likely to receive such benefits from their employer, hence the low revenue estimate.

The estimated decline in payments of the allowance for a spouse/common-law partner is $5 million.

Net impact on disposable income

Table 3-3 presents a breakdown by family income deciles of the net impact on disposable income of including employer-paid contributions in taxable income.

As can be seen, most of the decrease in disposable income comes from the increase in PIT and in CPP contributions. Decreases in CCB payments also have a significant impact on disposable income.

Table 3-3 Impact on disposable income by family income deciles (2018)

	Impact on disposable income ($ millions)						
Decile [Family Income Range ($)]	**Federal PIT payable**	**Refundable Medical Expense Supplement**	**CPP Contri-butions**	**WITB**	**CCB Payments**	**OAS, GIS, SPA**	**Net impact**
D1 [1 - 1,211]	0	0	-1	2	0	0	1
D2 [1,212 - 13,521]	-12	1	-23	9	-1	-15	-41
D3 [13,522 - 26,184]	-67	-2	-42	-30	-5	-1	-146
D4 [26,185 - 39,939]	-145	-4	-67	-4	-24	-8	-251
D5 [39,940 - 53,639]	-234	-2	-87	-4	-33	-6	-366
D6 [53,640 - 70,652]	-285	-1	-53	-2	-75	-13	-428
D7 [70,653 - 90,102]	-374	0	-76	-3	-36	-10	-500
D8 [90,103 - 117,556]	-440	-2	-67	-4	-53	-10	-575
D9 [117,557 - 164,057]	-533	0	-61	-3	-63	-10	-669
D10 [164,058 - Max]	-748	0	-55	3	-28	-6	-835
TOTAL	**-2,838**	**-10**	**-532**	**-35**	**-317**	**-78**	**-3,810**

Sources: Statistics Canada SPSD/M 26.0 and Parliamentary Budget Officer.

Note: The change in Federal PIT payable is net of all non-refundable tax credits, such as the medical expense tax credit for example.

Appendix A: Detailed Methodology

To measure the increase in federal tax receipts, we need to know:

- the number of workers and retirees benefiting from such plans;
- their level of income, tax payable and medical expenses prior to the inclusion of such benefits; and
- the value of the premiums (that is, contributions) paid by the employer.

Coverage and premiums data

The Canadian Life and Health Insurance Association (CLHIA) provided us with the number of certificate holders in group plans for each different type of benefit plan (extended health care, dental, supplementary hospital, etc.).[18] The CLHIA also provided total direct premiums written, with a breakdown by province for 2015.

Based on that information, we could compute an average premium per certificate holder for each type of benefit in each province.[19]

Table A-1 presents the number of certificate holders for extended health care by province (with a breakdown between insured and uninsured contracts).[20] Note that about 12 million out of the nearly 17 million certificate holders also benefit from dental coverage.

Table A-1 Number of certificates holders by province (thousands), 2015

Type of Benefit	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	TOTAL
Extended Health Care	191.6	22.0	232.8	143.8	2,951.7	4,843.7	334.8	322.9	845.7	937.0	**10,826.0**
EHC Uninsured	61.7	20.7	242.2	182.5	554.6	2,883.2	203.6	105.2	814.0	1,002.9	**6,070.5**

Source: Canadian Life and Health Insurance Association.

Allocation of benefits

We first created two subsamples from the population of individuals extracted from Statistics Canada's Social Policy Simulation Database and Model (SPSD/M): employees (individuals with positive employment income)[21] and retirees (individuals with private pension income and no employment income).[22]

Retirees represent about 16 per cent of our subsample of employees and retirees. We used each province's specific share of retirees for the allocation of the total certificates to retirees.

We then used data from Barnes and Anderson (2015) to allocate the extended health care certificates (insured and uninsured) across different income brackets. Their distributional data is based on a custom cross tabulation of responses to Statistics Canada's 2011 Survey of Longitudinal Income Dynamics (SLID).

Table A-2 is a reproduction of Table 4 of the Barnes and Anderson report. As can be expected, individuals in higher paying jobs have a higher probability of having employer-paid health benefits.

Table A-2 Medical Benefit Coverage in Canada by Individual Earnings (2011)

Individual Earnings ($)	Medical Benefit Coverage (%)
1 - 10,000	17
10,001 - 20,000	32
20,001 - 30,000	56
30,001 - 40,000	76
40,001 - 60,000	86
60,001 - 80,000	90
80,001 - 100,000	93
100,001 +	94

Sources: Barnes and Anderson (2015), using Statistics Canada's 2011 Survey of Labour and Income Dynamics.

There are a few caveats with using the coverage ratios from Table A-2. The first is the age of the data, as the SLID was last conducted in 2011. Also, the respondents were asked if their employer offered a medical insurance or health plan in addition to public health insurance coverage, even if they chose not to take them.

Thus, the SLID doesn't tell us exactly who is covered, and it also lacks any information on who pays the premium (employer, employee or both). The next section addresses the issue of the cost sharing of the premiums.

To reproduce the number of certificate holders in each province, as presented in Table A-1, we had to adjust the coverage ratios presented in Table A-2. Table A-3 shows our adjusted coverage ratios by province for employees.

In each case, we added the provincial adjustment factor (in percentage points) to each income bracket coverage ratio (capped at 100 per cent). This adjustment factor was computed in such a way that multiplying the population of the bracket by the coverage ratio and summing it up for each province would reproduce the number of certificates of Table A-1.

Table A-3 Adjusted Medical Benefit Coverage for Employees by Employment Income, by Province

Employment Income ($)	Adjusted Medical Coverage (%)									
	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
1 - 10,000	35	4	43	25	24	66	22	14	11	22
10,001 - 20,000	50	19	58	40	39	81	37	29	26	37
20,001 - 30,000	74	43	82	64	63	100	61	53	50	61
30,001 - 40,000	94	63	100	84	83	100	81	73	70	81
40,001 - 60,000	100	73	100	94	93	100	91	83	80	91
60,001 - 80,000	100	77	100	98	97	100	95	87	84	95
80,001 - 100,000	100	80	100	100	100	100	98	90	87	98
100,001 +	100	81	100	100	100	100	99	91	88	99
Adjustment factor	**18**	**-13**	**26**	**8**	**7**	**49**	**5**	**-3**	**-6**	**5**

Source: Parliamentary Budget Officer.

Table A-4 is the same as Table A-3, but for retirees. In their case, we created a new adjusted pension income variable, which is the previously described private pension income divided by 0.7. This gross-up of pension income is done to approximate the employment income the individual was earning just before retirement.

We assume the coverage ratios of retirees are the same as the ones for employees (before the adjustments in Table A-3), but applied to their adjusted pension income instead of the actual pension income.[23]

Table A-4 Adjusted Medical Benefit Coverage for Retirees by Adjusted Pension Income, by Province

Adjusted Pension Income ($)	Adjusted Medical Coverage (%)									
	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
1 - 10,000	49	10	55	36	33	73	38	32	29	38
10,001 - 20,000	64	25	70	51	48	88	53	47	44	53
20,001 - 30,000	88	49	94	75	72	100	77	71	68	77
30,001 - 40,000	100	69	100	95	92	100	97	91	88	97
40,001 - 60,000	100	79	100	100	100	100	100	100	98	100
60,001 - 80,000	100	83	100	100	100	100	100	100	100	100
80,001 - 100,000	100	86	100	100	100	100	100	100	100	100
100,001 +	100	87	100	100	100	100	100	100	100	100
Adjustment factor	**32**	**-7**	**38**	**19**	**16**	**56**	**21**	**15**	**12**	**21**

Source: Parliamentary Budget Officer.

We then allocated the extended health care benefits randomly within income groups and provinces.

For dental benefits (insured and uninsured), we simply randomly allocated them within the individuals covered by extended health care benefits. Thus, even if we didn't consider the employment (or retirement) income of the individual to do this allocation, since higher earners are more likely to have received health benefits, they will also be more likely to receive dental benefits.

Who pays the premiums

We used survey results presented in the Conference Board of Canada's *Benefits Benchmarking 2015* to determine the proportion of cost-sharing between employers and employees (or retirees) on extended health care and dental benefits (both insured and uninsured).

Tables 23 and 24 of *Benefits Benchmarking 2015* show survey results on the cost-sharing arrangements for full-time employees (Table 23 is for single premiums and Table 24 is for family premiums). Tables 28 and 29 show the same results for part-time employees, and Table 33 for retirees.

We used the average of single and family premiums[24] for full-time and part-time employees and multiplied them by their share of the employed population, based on the 2015 results of Statistics Canada's Labour Force Survey.[25] We did not have to do any computation for retirees; we simply used the shares from Table 33 of *Benefits Benchmarking 2015*.

Table A-5 shows the cost-sharing arrangements we applied in our analysis. For ease of calculation, we applied these cost-sharing ratios evenly among all income groups. This means that even though employees earning more than $100,000 annually are more likely to have coverage, only 62 per cent of them will have benefits that are completely paid by the employer.

Table A-5 Cost-Sharing Arrangements (per cent)

Type of benefit	100% employee-paid	100% employer-paid	Shared Cost	Average employer contribution (under shared cost arrangements)
Employees				
Extended health care	2	62	36	71
Dental	3	52	45	66
Retirees				
Extended health care	26	39	35	57
Dental	34	38	28	54

Sources: Conference Board of Canada, Statistics Canada and calculations by the Parliamentary Budget Officer.

Also for ease of analysis, we applied the same share of employer contribution to all individuals under a shared-cost plan. We used the average share which, for example, is 66 per cent for dental. We did this instead of applying a distribution with the same average share, but which would consist of a range of different employer shares for different individuals.

Finally, as mentioned in endnotes 19 and 24, we do not differentiate between single and family coverage. We, therefore, apply the same average premium to all covered individuals within each province.

Eligible medical expenses

Health insurance premiums paid by individuals are eligible medical expenses for the medical expenses tax credit. If the premiums paid by the employer are included in the individual's taxable income, the individual should also be allowed to consider them as eligible medical expenses.

The SPSD/M includes a variable for medical expenses ("idmedgro") which the model uses to compute the non-refundable and refundable medical expenses tax credits. This variable is imputed by Statistics Canada from the T1 Family File.

In our analysis, we added to the existing medical expenses the value of the employer-paid premiums allocated to an individual. This allows individuals who have incurred other medical expenses to better offset the increase in tax payable resulting from including employer-paid benefits in the taxable income. It does so by increasing the value of their medical expenses tax credit.

Indeed, they are more likely to reach the 3 per cent of income threshold used in the medical expenses tax credit if they already have other eligible medical expenses.

One caveat of our analysis is that by allocating the benefits randomly, we are possibly giving employer-paid benefits to an employee covered under a plan where he is paying 100 per cent of the premiums. In that case, the value of variable "idmedgro" should already include the total premiums he paid.

Thus, by adding to his medical expenses the value of the benefits we randomly allocated to him, we are double-counting premiums and artificially increasing his or her medical expenses tax credit.

Frequency weights

The SPSD/M is constructed to provide a statistically representative sample of the Canadian population. The database in SPSD/M version 26.0 contains 1,086,956 individuals grouped within 368,441 households.

To represent the total population, each household is assigned a frequency weight (variable "hdwgthh"). This implies that some households in the

database represent hundreds or even thousands of households (the values for the weight variable range from 3 to 6,045 with a mean of 33).

Because of the frequency weights and our random allocation of benefits within income groups and provinces, we could not always reproduce the exact number of certificates displayed in Table A-1.

However, the difference between the actual number of certificate holders and the number used in our analysis is less than 2 per cent for every type of benefit. Table A-6 below shows our allocated number of certificate holders by province and type of benefit.

Table A-6 Number of certificates holders by province after random allocation (thousands)

Type of Benefit	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	TOTAL
Extended Health Care	179.8	20.2	216.9	133.3	2,752.3	4,546.9	312.9	302.7	799.6	879.1	**10,143.6**
EHC Uninsured	59.3	19.7	226.7	171.6	527.3	2,710.6	191.3	99.0	778.8	946.1	**5,730.4**

Source: Parliamentary Budget Officer

Note that there seems to be a larger discrepancy between the number of people covered under EHC plans in Table A-6 and the number of certificate holders in Table A-1.

Recall from Table A-5 that about 2 to 3 per cent of employees and 26 to 34 per cent of retirees are part of a group plan, but are paying 100 per cent of the premiums out of their own pockets (the employer does not contribute financially).

For our analysis, these individuals are not relevant since they don't have any employer-paid benefit that would be included in their taxable income. Thus, Table A-6 only shows the number of individuals who have some or all the premiums paid by their employer.

Scaling up to 2018 dollar values

When we started our analysis, the latest data available on the number of certificate holders and the premiums written were for 2015. We, therefore, allocated the benefits to the 2015 population in the SPSD/M, but ran the simulations using the 2018 tax and transfer system.[26]

The CHLIA also provided data on the number of certificate holders and the premiums written for 2013 and 2014. Using these data, we computed province and benefit specific growth rates in the number of certificate holders and average premium paid.

However, our growth rates varied significantly from one year to another and by province. Since these are employer-provided benefits, the number of people covered is likely positively correlated with the employment rate, while

the average premium seemed negatively correlated with the number of people covered.

Since we don't have a breakdown between single and family coverage, it could simply come from an increase in the share of single coverage. Because of these data limitations and since the value of the benefits we allocated are in 2015 dollars, we increased our federal revenue estimate by the growth in the Consumer Price Index (CPI) from 2015 to 2018.

Two possible caveats can arise from scaling our estimate with this method. The first is that the actual number of people receiving employer-paid benefits could be higher in 2018 than the number in 2015. This would imply our revenue estimate is slightly underestimated.

The second is that if salaries and wages increased at a higher pace than the CPI, then some individuals might have moved into a higher income bracket and thus face a higher marginal tax rate in 2018.

This higher marginal tax rate means that including employer-paid benefits in their taxable income would further increase their tax payable.

This in turn implies that our revenue estimate is too low. However, this effect is likely negligible, as only individuals close to the next income bracket will be impacted since the brackets are annually indexed to inflation.

Omitted behavioural effect

Under the current tax rules, in many couples both spouses have extended health care benefits paid for by the employer. This can increase their medical coverage, since an individual can usually claim under his spouse's insurance plan the remaining portion of the cost not reimbursed by his own insurance plan. For example, his plan covers 80 per cent of the cost of prescription drugs and he can claim the remaining 20 per cent under his spouse's plan.

However, if employer-paid benefits were to be included in an individual's taxable income and consequently increase his tax bill, either he or his spouse could choose to opt out of their employer's plan and only keep the coverage of one plan.

This would be more likely to happen within young couples without children who are generally in good health, since they won't claim much medical expenses and won't see the need to keep dual coverage.

We did not account for such a behavioural change. It can be expected that at least some individuals would choose to opt out; therefore, this presents a downward risk on our revenue estimate for the federal government.

It is likely that the actual net federal balance will increase by a lower amount than that shown in Table 3-1, but it is hard to quantify the magnitude of this impact.

References

Barnes, Steve and Laura Anderson (2015). *Low Earnings, Unfilled Prescriptions: Employer-Provided Health Benefit Coverage in Canada*. Wellesley Institute Policy Paper.

Department of Finance Canada (2017). *Tax Expenditures and Evaluations*.

Dobrescu, Alexandru. *The Implications of Taxing Employer-Paid Health and Dental Benefits*. Ottawa: The Conference Board of Canada, 2017.

Stewart, Nicole. *Benefits Benchmarking 2015*. Ottawa: The Conference Board of Canada, 2016.

Notes

1. Certain employers continue on providing extended health benefits to some of their retirees. Under the current rules, the value of the employer-paid contributions to such plans is also not included in the taxable income of the retiree. See appendix A for more details on how retirees were included in the analysis.
2. The change in disposable income only considers the federal tax and transfers system. It doesn't take into account possible increases in provincial personal income tax payable and interactions with provincial tax credits or payments to individuals. Dobrescu (2017) presents a breakdown by province of the increased provincial tax burden for individuals under different illustrative scenarios.
3. This threshold is the same across all provinces and territories except: Alberta, British Columbia and Quebec, which have a somewhat higher threshold (about $1,000 higher) and Nunavut with a much higher threshold (about $10,000 higher). For couples, the threshold is applied on the sum of both spouses' net income and is higher than the single's amount ($16,593 for most provinces).
4. The value of the medical credit phases-out because the individual does not have any other medical expenses in this example. If he earns less than $46,605 (thus facing a federal marginal tax rate of 15 per cent) and has medical expenses amounting to at least 3 per cent of his income prior to the inclusion of the benefits, the net impact on his disposable income would be nil. For more information on the medical expenses tax credit, see: https://www.canada.ca/en/revenue-agency/services/forms-publications/publications/rc4065.html
5. See: http://www.budget.gc.ca/2016/docs/plan/ch7-en.html#_Toc446106846
6. http://www.fin.gc.ca/access/tt-it/rfte-edff-eng.asp
7. Since most provinces use the same personal income tax base as the federal government, employer-paid contributions are also excluded from taxable income in all the provinces except Quebec.
8. Barnes, Steve and Laura Anderson (2015). *Low Earnings, Unfilled Prescriptions: Employer-Provided Health Benefit Coverage in Canada*. Wellesley Institute Policy Paper. Their distributional data is based on responses to Statistics Canada's 2011 Survey of Longitudinal Income Dynamics (SLID).
9. Stewart, Nicole. *Benefits Benchmarking 2015*. Ottawa: The Conference Board of Canada, 2015.
10. We used the families total market income (SPSD variable "immmkt") to determine the income deciles. Families refer to Statistics Canada's census

family definition. This includes couples and their children (whatever the age of the children) living in the same dwelling. Grandchildren living with their grandparent(s) but with no parents present also constitute a census family. See: http://www23.statcan.gc.ca/imdb/p3Var.pl?Function=Unit&Id=32746

11. Note that for couples, either partner can claim all the medical expenses of the family (expenses for self, spouse and dependent children under 18 years of age). To maximise the value of the credit, the person with the lowest income should claim all the expenses. Thus, an individual earning more than $46,667 could still claim through his spouse the credit on the health benefits premiums included in his taxable income.

12. See : https://www.revenuquebec.ca/en/businesses/source-deductions-contributions/calculation-of-source-deductions-and-employer-contributions-in-certain-situations/special-rules-concerning-type-of-remuneration/taxable-benefits/

13. Like the phasing-out threshold (see end note 3), the amount above which an individual becomes eligible varies in the same provinces and territories: Alberta ($2,760), British Columbia ($4,750), Quebec ($2,400) and Nunavut ($6,000).

14. Adding the benefits value of $1,400 to the employment income of $2,000 gives the employee a working income of $3,400, which is above the $3,000 threshold for eligibility. When the employment income becomes higher than $7,236, there is no more gain in the first scenario since the employee has already reached the cap in the WITB payment.

15. Depending on the number of children eligible to the benefit and their ages, the CCB will be completely phased-out with a family income between $150,000 and $250,000.

16. In practice, SPSD/M does not compute the change in next year's CCB payments, but rather the change in the current year's payments by assuming the change in net income had occurred last year using a deflator of the current year's net income. The deflator is based on the change in the consumer price index (CPI) between the two years. Our $317 million figure is the result of this method, and thus the actual decrease in 2019 CCB payments could be slightly higher.

17. Because we allocated employer-paid health benefits randomly within income groups and that even individuals with the lowest income had a positive, albeit lower, probability of being covered, we have allocated benefits to some individuals eligible for GIS. However, it is unlikely that someone receiving GIS (which implies he or she receives very little private pension income from a former employer), would nevertheless still be covered in retirement under an employer-provided extended health care plan. See Appendix A for more details on the methodology used to allocate benefits.

18. The data provided by CHLIA included also other types of benefits such as income replacement, accidental death and dismemberment, creditors disability, critical illness, supplementary hospital and travel health. We only kept EHC and dental benefits as they are the same ones used by the Department of Finance to compute its tax expenditure for the non-taxation of benefits from private health and dental plans. Furthermore, most of these other types of benefits are usually either paid by the employee himself, have

a relative low annual premium or are already included in taxable income, which would not significantly change our results.

19. We compute the average premium as the total of direct premiums written divided by the number of certificate holders. However, premiums differ when an individual only has single coverage versus family coverage (the premium for the latter is usually a bit more than twice the single premium). Because our random allocation of benefits does not consider whether the individual has single or family coverage, the average premium will be somewhat overestimated for people with single coverage and underestimated for people with family coverage.

20. Uninsured contracts, also known as administrative services only (ASO) contracts, are plans where the management of the claims is contracted to a third party (usually an insurance company) but the payments of the claims are the responsibility of the employer. Therefore, the employer assumes the risks that the total value of the claims could be higher than the amount of premiums that would have been paid under an insured plan.

21. Employment income comes from SPSD/M variable "idiemp" which comprises of wages and salaries before deductions, including military pay and allowances.

22. Private pension income comes from SPSD/M variable "idipens" which includes retirement pensions from all private sources, primarily employer pension plans, annuities, superannuation or Registered Retirement Income Funds. Income withdrawn from RRSPs at ages 65 or older is also included, but not income withdrawn before the age of 65, which is treated as RRSP withdrawals.

23. Note that we defined retirees as individuals having private pension income and no employment income. Thus, our subsample of retirees excludes individuals who earned employment income as well as pension income (they would still be considered employees). This can be problematic for individuals with high pension income and low employment income, as they should have a higher probability of being covered because of their high pension income, but since we consider them as employees, they will have a low probability of coverage because of their low employment income. However, as the next section details, a much larger fraction of retirees must pay the entire premium related to the group health benefits provided by the ex-employer. Thus, the statistical expected value of the benefits is almost the same for an individual earning between $20,000 and $30,000 of employment income as that of a retiree receiving between $28,000 and $70,000 of pension income.

24. This implicitly assumes that half of the employees have familial coverage, while the other half has only single coverage. This assumption does not have a big impact on the results since the difference in the cost sharing ratios is less than three percentage points.

25. Based on CANSIM table 282-0123, there were 17.9 million employees in Canada in 2015, 81.1 per cent (14.6 million) working full-time, and 19.9 per cent (3.4 million) part-time.

26. SPSD/M allows you to run simulations using different years for population as well as the tax and transfer system. The base year of the population data in version 26.0 is 2014 and the household weights are changed from one year

to another to reproduce the demographics of that year while the dollar values (income, medical expenses, etc.) are grown using the Consumer Price Index (CPI).